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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/612,100 | 07/01/2003 | Sea-Weng Young | B-5155 621087-3 | 3404 |
| 36716 | 7590 | 09/28/2005 | EXAMINER | |
| LADAS & PARRY 5670 WILSHIRE BOULEVARD, SUITE 2100 LOS ANGELES, CA 90036-5679 | | | LUK, LAWRENCE W | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2187 | |
| DATE MAILED: 09/28/2005 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/612,100

Applicant(s)

YOUNG ET AL.

Examiner

Lawrence W. Luk

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-11 and 13-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-6 is/are allowed.
- 6) ☐ Claim(s) 7-11 and 13-16 is/are rejected.
- 7) ☐ Claim(s) 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. The instant application having Application No. 10/612,100 has a total of 15 claims pending in the application; there are 3 independent claims and 12 dependent claims, all of which are rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 7 and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Hanada et al. (2001/0028571).

Claim 7

As to claim 7, Hanada et al. disclose a power-on method for a circuit system having a power supply terminal and a charge input terminal, comprising: coupling the power supply terminal to a battery and the charge input terminal to an adaptor; detecting a voltage of the battery, wherein when the voltage of the battery is below a threshold voltage, a control signal having a first level is output; turning on a second switch such that the adaptor supplies the circuit system through the charge input

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terminal and the second switch to start the circuit system and charge the battery; detecting 1 voltage of the battery wherein, when the voltage of the battery is above a threshold voltage, the control signal having a second level is output such that the second switch is turned off, a third switch is turned on, the charge input terminal is coupled to the battery through the third switch, and the battery supplies the circuit system; and outputting a switch signal from the circuit system to control a first switch coupled between the adaptor and the charge input terminal for controlling charge capacity. (see column 1, [0016]).

Claim 8

As to claim 8, Hanada et al. disclose wherein the first level is a low level, and the second level is a high level. (see column 12, [0149]).

4. Claims 13 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Soyer (2004/0046528).

Claim 14

As to claim 14, Soyer disclose in figure 1, a power-on method for a circuit system, comprising: coupling a terminal of the circuit system to a batter and the other terminal of the circuit system to an adaptor; detecting a voltage of the battery, wherein when the voltage of the battery is below a threshold voltage, the adaptor supplies the circuit system to start the circuit s stem and char e the batter and detecting a voltage of the battery, wherein when the voltage of the battery is above a threshold voltage, the

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battery supplies the circuit system; wherein the circuit system is a communication apparatus. (see column 2, [0026] and column 1, [0001]).

Claim 13

As to claim 13, Soyer disclose in column 1, [0003], further comprising the step of converging voltage of the battery to display data and displaying the display data to show charge capacity.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hanada et al. (2001/0028571) in view of Koyama et al. (6,744,698).

Claim 9

As to claim 9, Hanada et al. disclose elements as claimed except Hanada et al. fails to teach the limitation of **wherein the threshold voltage is 3.2V**.

Koyama et al. disclose in column 1, lines 33, wherein the threshold voltage is 3.0V.

Hanada et al. and Koyama et al. are analogous art because they are from the same field of endeavor of a circuit for detecting remaining battery capacity.

At the time of the invention it would have been obvious to a person of ordinary skill in the art wherein the threshold voltage is 3.0V.

The suggestion/motivation for doing so would have been the first control unit may output an activation signal to start the second control unit when the battery output voltage drops to the first threshold voltage while driving the multiple load units.

Therefore, it would have been obvious to combine Koyama et al. with Hanada et al. for the benefit of the threshold voltage is 3.0V., since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Claim 10

As to claim 10, Hanada et al. in view of Koyama et al. are applied supra, and Koyama et al. further disclose in figure 2, further comprising the step of converging voltage of the battery to display data and displaying the display data to show charge capacity. (see column 7, lines 48-52).

Claim 11

As to claim 11, Hanada et al. in view of Koyama et al. are applied supra, and Koyama et al. further disclose in figure 2, wherein the circuit system is a handset. (see column 1, lines 13-15).

7. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Soyer (2004/0046528) in view of Koyama et al. (6,744,698).

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Claim 15

As to claim 15, Soyer disclose elements as claimed except Soyer fails to teach the limitation of **wherein the threshold voltage is 3.2V.**

Koyama et al. disclose in column 1, lines 33, wherein the threshold voltage is 3.0V.

Soyer and Koyama et al. are analogous art because they are from the same field of endeavor of a circuit for detecting remaining battery capacity.

At the time of the invention it would have been obvious to a person of ordinary skill in the art wherein the threshold voltage is 3.0V.

The suggestion/motivation for doing so would have been the first control unit may output an activation signal to start the second control unit when the battery output voltage drops to the first threshold voltage while driving the multiple load units.

Therefore, it would have been obvious to combine Koyama et al. with Soyer for the benefit of the threshold voltage of 3.0V., since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Claim 16

As to claim 16, Soyer in view of Koyama et al. are applied supra, and Koyama et al. further disclose in figure 2, wherein, when the voltage of the battery is below a threshold voltage, a control signal having a first level is output to turn on a second switch such that the adaptor supplies the circuit system through the second switch to start the circuit system and charge the battery. **(see column 11, lines 59-64).**

Allowable Subject Matter

8. Claims 2-6 are allowed.

Claim 3

The primary reason for allowance of the Claim 3 is the inclusion of when a voltage of the input terminal is below a threshold voltage, the output terminal outputs a control signal having a first level such that the adaptor supplies the circuit system through the charge input terminal to start the circuit s stem and charge the battery; when a voltage of the input terminal is above the threshold voltage, the output terminal outputs the control signal having a second level such that the battery supplies the circuit system; when the first control terminal has the first level, the first switch is turned on; when the first control terminal has the second level, the first switch is turned off, and the first signal is preset at the second level; when the second control terminal has the first level, the second switch is turned on, and when the second control terminal has the second level, the second switch is turned off; and when the third control terminal has the first level, the third switch is turned on, and when the third control terminal has the second level, the third switch is turned off.

Claims 2 and 4-6 depend from Claim3 and therefore are allowable for at least the same reasons noted above with respect to claim 3.

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9. Claim 17 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The primary reasons for allowance of **Claim 17** in the instant application is the combination with the inclusion in these claims that **wherein when the voltage of the battery is above a threshold voltage, a control signal having a second level is output to turn off the second switch and turn on a third switch such that the circuit system is coupled to the battery through the third switch and the battery supplies the circuit system.**

: IMPORTANT NOTE :

If the applicant should choose to rewrite the independent claims to include the limitation recited in claim 17, the applicant is encouraged to amend the **title of the invention** such that it is descriptive of the invention as claimed as required by sec. **606.01** of the **MPEP**. Furthermore, the **Summary of the Invention** and the **Abstract** should be amended to bring them into harmony with the allowed claims as required by paragraph 2 of **§ 1302.01** of the **MPEP**.

As allowable subject matter has been indicated, applicant's response must either comply with all formal requirements or specifically traverse each requirement not complied with. See **37 C. F. R. § 1.111(b)** and **§ 707.07 (a)** of the **M.P.E.P.**

10. **RELEVANT ART CITED BY THE EXAMINER**

The following prior art made of record and not relied upon is cited to establish the level of skill in the applicant's art and those arts considered reasonably pertinent to applicant's disclosure.

See MPEP 707.05 (c).

The following references teach **the charge switching circuit with three switch**

| FOREIGN PATENT NUMBER | FIGURES |
|-----------------------|---------|
| JP 2000-139037 | 1 |

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence W Luk whose telephone number is (571) 272-2080. The examiner can normally be reached on 7 a.m. to 5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald A Sparks can be reached on (571) 272-4201. The fax phone number for the organization where this application or proceeding are (703) 746-7239, (571) 272-2100 for regular communication and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to receptionist whose telephone number is (571) 272-2100.

LWL
September 16, 2005

Lawrence Luk
examiner
9/16/05